

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION**

BANDSPEED, INC.,)	CASE NO. 1:14-cv-433-LY
)	
Plaintiff,)	
)	
v.)	
)	
BROADCOM CORPORATION,)	
)	
Defendant.)	
)	
)	
)	

**BROADCOM CORPORATION’S ANSWER
TO BANDSPEED, INC.’S COMPLAINT AND COUNTERCLAIMS**

Defendant Broadcom Corporation (“Broadcom”), by and through counsel, hereby answer Bandspeed, Inc.’s (“Bandspeed”) Complaint (“Complaint”), and further assert defenses and counterclaims as follows:

I. NATURE OF ACTION

1. Broadcom admits that Bandspeed’s Complaint purports to allege a patent infringement action. Broadcom denies, however, that Bandspeed states a meritorious claim against it. Broadcom denies the remaining allegations of paragraph 1.

2. Broadcom lacks knowledge or information sufficient to form a belief as to the truth of Bandspeed’s alleged ownership of the asserted patents identified in Paragraph 2, and Broadcom therefore denies same. Broadcom denies the remaining allegations, including any and all allegations of direct or indirect infringement in Paragraph 2.

3. Broadcom denies the allegations of Paragraph 3.

4. Broadcom denies the allegations of Paragraph 4.

II. THE PARTIES

5. Broadcom lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 5 of the Complaint, and therefore denies same.

6. Broadcom admits that it is a California corporation with its principal place of business located at 5300 California Avenue, Irvine, California. Broadcom admits it is authorized to do business in Texas and may be served by its registered agent National Registered Agents, Inc., 1999 Bryan Street, Ste. 900, Dallas, Texas 75201-3136.

III. JURISDICTION AND VENUE

7. Broadcom admits that the Complaint purports to be an action for patent infringement under Title 35 §§ 271, 281, 283 and 284–85 of the United States Code. Broadcom admits that subject matter jurisdiction is proper in this Court pursuant to 28 U.S.C. §§ 1331 and 1338(a).

8. Broadcom denies that this Court has personal jurisdiction over Broadcom. Furthermore, Broadcom denies that venue is proper in this Court pursuant to 28 U.S.C. §1391(b), (c), and 1400. However, Broadcom will not contest personal jurisdiction or venue in this case.

IV. PLAINTIFF'S PATENTS

9. Broadcom denies the allegations contained in Paragraph 9.

10. Broadcom denies the allegations contained in Paragraph 10.

11. Broadcom lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 11 of the Complaint, and therefore denies same.

V. DEFENDANT'S ACTS

12. Broadcom denies the allegations contained in Paragraph 12.

13. Broadcom denies the allegations contained in Paragraph 13.

14. Broadcom admits that Bandspeed filed lawsuits in 2009 and 2010 against a number of defendants. Broadcom admits that some of the defendants used Broadcom Bluetooth products. Broadcom admits that some of the defendants notified Broadcom of the lawsuits. Broadcom denies the remaining allegations of Paragraph 14.

15. Broadcom admits that it received a subpoena from Bandspeed in 2012, seeking discovery about Broadcom Bluetooth products. Broadcom lacks knowledge or information sufficient to form a belief as the remaining allegations in Paragraph 15, and therefore denies the same.

16. Broadcom denies the allegations contained in Paragraph 16.

17. Broadcom denies the allegations contained in Paragraph 17.

18. Broadcom admits that it provides, sells, and offers for sale certain integrated circuits that comply with the Bluetooth Specification (including the adaptive frequency hopping protocol therein). Broadcom denies the remaining allegations of Paragraph 18.

19. Broadcom lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 19 of the Complaint, and therefore denies same.

20. Broadcom admits Paragraph 20.

21. Broadcom has sold certain integrated circuits in compliance with version 1.2 or later of the Bluetooth Special Interest Group Specifications. Broadcom denies the remaining allegations contained in Paragraph 21.

22. Broadcom tests certain integrated circuits to ensure compliance with certain (but not all) features in the Bluetooth Special Interest Group Specifications. Broadcom denies the remaining allegations contained in Paragraph 22.

23. Broadcom denies the allegations contained in Paragraph 23.

24. Broadcom denies the allegations contained in Paragraph 24.

25. Broadcom denies the allegations contained in Paragraph 25.

26. Broadcom denies the allegations contained in Paragraph 26.

27. Broadcom denies the allegations contained in Paragraph 27.

28. Broadcom denies the allegations contained in Paragraph 28.

29. Broadcom denies the allegations contained in Paragraph 29.

30. Broadcom denies the allegations contained in Paragraph 30.

**COUNT ONE
PATENT INFRINGEMENT – U.S. PATENT NO. 7,027,418**

31. Broadcom repeats, re-alleges and incorporates by reference each of its responses to Paragraphs 1 – 30 as though fully set forth herein.

32. Broadcom denies the allegations contained in Paragraph 32.

33. Broadcom denies the allegations contained in Paragraph 33.

34. Broadcom denies the allegations contained in Paragraph 34.

35. Broadcom denies the allegations contained in Paragraph 35.

**COUNT TWO
PATENT INFRINGEMENT – U.S. PATENT NO. 7,570,614**

36. Broadcom repeats, re-alleges and incorporates by reference each of its responses to Paragraphs 1 – 30 as though fully set forth herein.

37. Broadcom denies the allegations contained in Paragraph 37.

38. Broadcom denies the allegations contained in Paragraph 38.

39. Broadcom denies the allegations contained in Paragraph 39.

40. Broadcom denies the allegations contained in Paragraph 40.

**COUNT THREE
PATENT INFRINGEMENT – U.S. PATENT NO. 7,477,624**

41. Broadcom repeats, re-alleges and incorporates by reference each of its responses to Paragraphs 1 – 30 as though fully set forth herein.

42. Broadcom denies the allegations contained in Paragraph 42.

43. Broadcom denies the allegations contained in Paragraph 43.

44. Broadcom denies the allegations contained in Paragraph 44.

45. Broadcom denies the allegations contained in Paragraph 45.

**COUNT FOUR
PATENT INFRINGEMENT – U.S. PATENT NO. 7,903,608**

46. Broadcom repeats, re-alleges and incorporates by reference each of its responses to Paragraphs 1 – 30 as though fully set forth herein.

47. Broadcom denies the allegations contained in Paragraph 47.

48. Broadcom denies the allegations contained in Paragraph 48.

49. Broadcom denies the allegations contained in Paragraph 49.

50. Broadcom denies the allegations contained in Paragraph 50.

**COUNT FIVE
PATENT INFRINGEMENT – U.S. PATENT NO. 8,542,643**

51. Broadcom repeats, re-alleges and incorporates by reference each of its responses to Paragraphs 1 – 30 as though fully set forth herein.

52. Broadcom denies the allegations contained in Paragraph 52.

53. Broadcom denies the allegations contained in Paragraph 53.

54. Broadcom denies the allegations contained in Paragraph 54.

55. Broadcom denies the allegations contained in Paragraph 55.

VI. WILLFULNESS

56. Broadcom repeats, re-alleges and incorporates by reference each of its responses to Paragraphs 1 – 55 as though fully set forth herein. Broadcom denies the allegations contained in Paragraph 56.

57. Broadcom denies the allegations contained in Paragraph 57.

VII. JURY DEMAND

58. Bandspeed demands a jury on all issues triable to which no response is required.

VIII. REQUEST FOR RELIEF

In response to Bandspeed's Request for Relief, Broadcom denies that Plaintiff is entitled to any relief, and in particular to any of the relief requested in paragraphs A – D of Plaintiff's Request for Relief.

AFFIRMATIVE DEFENSES

Without admitting or acknowledging that Broadcom bears the burden of proof as to any of the following affirmative defenses, based upon information and belief, Broadcom asserts the following defenses:

**FIRST DEFENSE
(License)**

Bandspeed's claims of infringement under the Asserted Patents are barred, in whole or in part, because Broadcom and its accused products are licensed. In particular, Broadcom is covered by license agreements secured by its suppliers and/or customers. Additionally, Broadcom is licensed per agreements that Bandspeed made with the Bluetooth SIG and/or IEEE standard setting bodies as described in detail herein.

**SECOND DEFENSE
(Non-Infringement of the Asserted Patents)**

Broadcom has not infringed, either literally or under the doctrine of equivalents, any valid claim of the Asserted Patents; therefore, Broadcom is not liable for any infringement thereof.

**THIRD DEFENSE
(Invalidity of the Asserted Patents)**

The Asserted Patents are invalid because they are unpatentable as anticipated under 35 U.S.C. § 102, unpatentable as obvious under 35 U.S.C. § 103, fail to meet one or more requirements of 35 U.S.C. § 112, and/or do not otherwise meet one of more requirements of Title 35 of the United States Code.

**FOURTH DEFENSE
(Laches)**

On information and belief, Bandspeed's attempted enforcement of the Asserted Patents against Broadcom is limited and/or barred by the doctrine of laches. Bandspeed's delay in filing suit against Broadcom was unreasonable and caused material evidentiary and economic prejudice to Broadcom's investments of economic resources, and to Broadcom's ability to defend itself. As such, recovery of damages at least up to and including the time of filing of suit is barred.

**FIFTH DEFENSE
(Estoppel)**

On information and belief, Bandspeed's attempted enforcement of the Asserted Patents against Broadcom is barred by estoppel, including without limitation promissory and equitable estoppel as explained herein.

**SIXTH DEFENSE
(Waiver)**

Bandspeed's claims of infringement under the Asserted Patents are barred, in whole or in part, by the doctrine of waiver, whereby Bandspeed has waived, impliedly or expressly, its right to enforce the asserted patents.

**SEVENTH DEFENSE
(Unclean Hands)**

Bandspeed's claims of infringement under the Asserted Patents are barred, in whole or in part, by the doctrine of unclean hands based upon, *inter alia*, Bandspeed's actions within the Bluetooth SIG and/or IEEE standard setting organizations as described herein.

**EIGHTH DEFENSE
(Patent Misuse)**

Bandspeed's claims of infringement under the Asserted Patents are barred, in whole or in part, by the doctrine of patent misuse based upon, *inter alia*, Bandspeed's actions within the Bluetooth SIG and/or IEEE standard setting organizations and the resulting anticompetitive effects as described herein.

COUNTERCLAIMS

Pursuant to Rule 13 of the Federal Rules of Civil Procedure, Broadcom asserts the following Counterclaims against Bandspeed:

1. Broadcom Corporation ("Broadcom") is a California Corporation with its principal place of business is located at 5300 California Avenue, Irvine, California.
2. On information and belief, Bandspeed is a privately-held company incorporated under the laws of Delaware, with its corporate headquarters located in Austin, Texas.

JURISDICTION, VENUE AND COMMERCE

3. The following counterclaims arise under the United States patent laws, 35 U.S.C. § 101 *et seq.* These counterclaims seek declaratory relief for which this Court has jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338, 2201 and 2202.

4. The Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1337.

5. The Court has supplemental jurisdiction over the state law claims asserted in this action pursuant to 28 U.S.C. § 1367 asserted herein because the state and federal claims arise from a common nucleus of operative facts.

6. The conduct alleged herein has affected and is affecting a substantial volume of interstate and foreign commerce, including commerce in this District.

7. To the extent that this action remains in this District, venue is appropriate because Bandspeed has consented to the propriety of venue in this Court by filing its claim for patent infringement in this Court, in response to which these counterclaims are asserted.

8. Bandspeed has submitted to the personal jurisdiction of this Court by bringing the present action.

9. By its Complaint, Bandspeed has alleged that it is the assignee of United States Patent No. 7,027,418 (“the ‘418 Patent”), issued on April 11, 2006 for “Approach for Selecting Communications Channels Based on Performance”; United States Patent No. 7,570,614 (“the ‘614 patent”), issued on August 4, 2009 for “Approach for Managing Communications Channels Based on Performance”; United States Patent No. 7,477,624 (“the ‘624 Patent”), issued on January 13, 2009 for “Approach for Managing the Use of Communications Channels Based on Performance”; United States Patent No. 7,903,608 (“the ‘608 Patent”), issued on March 8, 2011 for “Approach for Managing the Use of Communications Channels Based on Performance”; and United States Patent No. 8,542,643 (“the ‘643 Patent”), issued on September 24, 2013 for “Approach for Managing the Use of Communications Channels Based on Performance” (collectively, the “Asserted Patents”).

10. Bandspeed has alleged that Broadcom has infringed the Asserted Patents, and Broadcom denies those allegations. Based on Bandspeed's Complaint against Broadcom, and Broadcom's Answer thereto, there exists an actual and justiciable controversy between Bandspeed and Broadcom concerning the Asserted Patents.

11. Broadcom denies infringement and seeks declaratory judgment that each of the Asserted Patents is invalid and/or not infringed.

NATURE OF THE ACTION

1. Broadcom is a global leader in wireless technology and a leading manufacturer of chips employing Bluetooth, Wi-Fi and other connectivity and location technologies. Broadcom supplies chips that provide wireless functionality for some of the accused devices in previous Bandspeed patent litigations and therefore certain product sales are likely already licensed and immune from suit.

2. Broadcom is and was during the relevant time period a member of the IEEE and Bluetooth SIG.

3. Bandspeed participated in working groups of both the Bluetooth Special Interest Group ("Bluetooth SIG") and the Institute of Electrical and Electronics Engineers ("IEEE") (collectively "Standard Setting Organizations" or "SSOs") responsible for "coexistence mechanisms."

4. In these working groups, Bandspeed advocated adoption of technology related to "adaptive frequency hopping" ("AFH") into the Bluetooth SIG's Bluetooth 1.2 specification standard and IEEE's 802.15 standard.

5. At the same time as its participation in the SSO working groups, Bandspeed sought to patent an allegedly similar implementation of AFH technology.

6. According to Bandspeed, Bluetooth SIG and the IEEE adopted Bandspeed's advocated implementation of AFH technology as part of the Bluetooth 1.2 standard and the IEEE 802.15 standard, respectively.

The Role of Standards Organizations and Standards

7. Standards-setting organizations establish standards for high-technology industries to ensure compatibility and interoperability among thousands of products and thousands of companies.

The Bluetooth Special Interest Group (“SIG”)

8. Bluetooth SIG is a standard setting organization and global trade association with over 20,000 member companies. Bluetooth SIG oversees the development of Bluetooth standards and the licensing of Bluetooth technologies and trademarks to manufacturers.

9. Bandspeed joined the membership of Bluetooth SIG in 2001.

10. When it became a Bluetooth member, Bandspeed accepted and agreed to abide by the Bluetooth SIG’s Patent/Copyright License Agreement (“License Agreement”).

The Institute of Electrical and Electronics Engineers (“IEEE”)

11. The IEEE is standard setting organization involved in setting and promulgating certain standards for wireless technology. The IEEE develops consensus standards for various technologies, including the 802.15 standard, which governs wireless personal area networks such as “Bluetooth” wireless technology.

12. Bandspeed, as a participant in the IEEE standards setting process, and pursuant to the agreed-upon Bylaws of the IEEE, made explicit and/or implicit material representations to other participants, including Broadcom, and the technology industry that (i) Bandspeed had no intellectual property interest in the technology it proposed and (ii) Bandspeed would either license its technology on FRAND or royalty-free terms, or would refrain from suing other companies for compliance with any standards adopted by the IEEE.

STATEMENT OF FACTS

13. Beginning in or about November 2000, Bandspeed embarked upon a calculated course of conduct over a period of several years aimed at influencing the adoption of an industry standard incorporating its purportedly proprietary technology, even as it pursued patent applications directed to the use of the same technology.

14. During the period from 2000 to 2002, Bandspeed made numerous submissions and presentations to the SSOs promoting its alleged implementation of AFH technology. AFH reduces interference between wireless technologies, including “Bluetooth,” that share the 2.4 GHz spectrum.

15. While proposing its implementation of AFH technology to Bluetooth SIG and the IEEE, Bandspeed sought to patent aspects of the same implementation of that AFH technology. The patents eventually issued as the Asserted Patents.

16. The named inventors on the Asserted Patents are Hongbing Gan, Bijan Treister, and Efstratios Skafidas — the same Bandspeed employees involved with Bluetooth SIG and IEEE working groups.

17. Broadcom and numerous other technology companies reasonably relied on Bandspeed’s representations, omissions, and conduct, and developed, manufactured, marketed and sold products that adhered to the standards promulgated by the IEEE, which included AFH technology.

18. Despite its representations and releases to the contrary, Bandspeed then sued numerous companies, including Broadcom, for patent infringement accusing products that comply with the Bluetooth SIG 1.2 specification and IEEE 802.15 standard incorporating AFH technology.

Bandspeed in Bluetooth SIG

19. During Bandspeed’s membership in the Bluetooth SIG, Bandspeed contributed to the “Coexistence Working Group” including providing direct input for the development of the “AFH Specification” in at least February and March 2002. Indeed, Bandspeed and Hongbing Gan are listed as primary contributors to multiple versions of the AFH Specification documents.

20. Hongbing Gan is a named inventor on each of the Asserted Patents.

21. Hongbing Gan contributed to the development of Adaptive Frequency Hopping features in the Bluetooth 1.2 specification.

22. Section 4(b) of the License Agreement requires Bandspeed to grant a royalty-free license to its patents because Bandspeed made Contributions to the relevant Bluetooth Specification. Section 4(b) states as follows:

All Contributions by a contributing Associate or Adopter Member that have been submitted for inclusion in any Bluetooth Specification or Draft Bluetooth Specification shall be licensed by the contributing Associate or Adopter Member to all Licensees (as defined in Section 5(b) hereof) under the grant specified in Section 5(b) hereof for all Bluetooth Specifications in which the Contributions become included, even if such Associate or Adopter Member has withdrawn or been terminated as a Member of Bluetooth SIG.

23. The scope of the license grant is defined in Section 5(b) of the License Agreement, which relates to patent licenses and states in relevant part as follows:

Effective upon the adoption by Bluetooth SIG of each Bluetooth Specification, each Associate and Adopter Member and their Affiliates hereby grant to each Promoter member and Associate and Adopter Member and all of their respective Affiliates . . . a nonexclusive, royalty-free, perpetual, irrevocable, nontransferable, nonsublicenseable, worldwide license under its Necessary Claims solely to make, have made, use, import, offer to sell, sell and otherwise distribute and dispose of Compliant Portions

24. The terms of License Agreement Sections 4(b) and 5(b) require Bandspeed to grant a royalty free license to the Bandspeed patents as a result of Bandspeed's membership and participation in the Bluetooth SIG "working group" that created the Bluetooth specification.

25. The License Agreement that Bandspeed agreed to as part of its membership in the Bluetooth SIG provides that contributions to a specification that is adopted must be licensed, royalty free, to other members, regardless of whether the contributing member later withdraws from the Bluetooth SIG.

26. Bandspeed claims to own the Asserted Patents, and further claims that practicing the Bluetooth SIG standard specification version 1.2 and later necessarily infringes Bandspeed's Asserted Patents.

27. Upon information and belief, Bandspeed alleges that it withdrew from Bluetooth on December 16, 2002.

Bandspeed and The IEEE 802.15 Coexistence Mechanism Technology

28. The IEEE has various “working groups” that address discrete areas of technology.

29. One of those groups was the 802.15 Working Group, the IEEE committee responsible for standards related to wireless personal area networks (“WPAN”).

30. The 802.15 Coexistence Task Group 2 (“TG2”) was a subgroup of the 802.15 Working Group that focused on technology relating to “coexistence mechanisms” for WPANs. Within TG2, a special ad hoc group was eventually formed specifically to address a coexistence solution known as AFH.

31. Hongbing Gan contributed to the development of Adaptive Frequency Hopping features in the IEEE 802.15 specification.

32. During Bandspeed’s IEEE membership, all of the named inventors on the Asserted Patents (all then-employees of Bandspeed) and two different Chief Technology Officers of Bandspeed participated in IEEE meetings and in TG2

33. Bandspeed claims to own the Asserted Patents, and further claims that practicing the IEEE 802.15 standard necessarily infringes Bandspeed’s Asserted Patents.

34. As a participant in the IEEE and the wireless technology industry, Broadcom has relied and relies upon, and has adopted, various standards set by the IEEE, including IEEE 802.15, in developing, manufacturing, marketing and selling its products.

35. Broadcom had a direct relationship with Bandspeed because Bandspeed represented to Broadcom and other IEEE members that Bandspeed would adhere to the IEEE’s patent policy.

36. Under clause 6 of the IEEE-SA Standards Board Bylaws, the patent policy in effect at the time, the IEEE patent policy stated:

IEEE standards may include the known use of a patent(s), including patent applications . . . provided the IEEE receives assurance from the patent holder that it will license applicants under reasonable terms and conditions for the purpose of implementing the standard. This assurance shall be provided without coercion and prior to approval of the standard (or reaffirmation when a patent becomes known after initial approval of the standard).

37. As a result of Broadcom's participation in the IEEE and its detrimental reliance upon Bandspeed's representations that it would abide by the IEEE's patent policy, Broadcom was directly injured by Bandspeed.

COUNT I – BREACH OF CONTRACT (BLUETOOTH SIG)

38. Broadcom repeats, re-alleges and incorporates by reference Paragraphs 1-37 above as if fully set forth herein.

39. For consideration, including Bandspeed's Bluetooth SIG membership and its participation in standards setting of the Bluetooth SIG standards, Bandspeed entered into an express and/or implied contract with the Bluetooth SIG members (or alternatively, with the Bluetooth SIG to which Bluetooth SIG members and others are third-party beneficiaries) in which Bandspeed agreed, *inter alia*, to abide by the Bluetooth SIG's Patent/Copyright License Agreement ("License Agreement") rules and policies.

40. The License Agreement constitutes a contract between Bandspeed and the Bluetooth SIG members (or alternatively between Bandspeed and Bluetooth SIG, to which Bluetooth SIG members and others are third-party beneficiaries).

41. In addition to its implicit and/or explicit contracts relating to the Bluetooth SIG, Bandspeed knew and understood that it had agreed to the terms of the Bluetooth SIG's License Agreement as a condition of membership in the Bluetooth SIG.

42. By agreeing to the terms of the License Agreement, Bandspeed agreed to grant all other Bluetooth SIG members a royalty free license to claims in its issued patents and pending patent applications that are "necessary" to practice any Bluetooth standards that are adopted.

43. According to Bandspeed's own complaint against Broadcom, claims of the Asserted Patents are allegedly necessary to practice certain Bluetooth standards adopted by the Bluetooth SIG.

44. Furthermore, Bandspeed's representations and other conduct created express and/or implied contracts with the Bluetooth SIG and its members (or alternatively between

Bandspeed and the Bluetooth SIG, to which Bluetooth SIG members and others are third-party beneficiaries).

45. Bandspeed breached its contractual obligations relating to the Bluetooth SIG members and to the License Agreement, including through, *inter alia*, bringing litigation accusing Broadcom of infringing the Asserted Patents.

46. Bandspeed breached its contractual obligations relating to the Bluetooth SIG and the License Agreement, including for attempting to seek royalties and/or other relief in contravention of the existing royalty free license to claims in its issued patents and pending patent applications that are “necessary” to practice any Bluetooth standards that are adopted.

47. Broadcom has incurred damages, and will be further damaged in the future due to Bandspeed’s breach of its contractual obligations relating to the License Agreement.

COUNT II – PROMISSORY ESTOPPEL (BLUETOOTH SIG)

48. Broadcom repeats, re-alleges and incorporates by reference Paragraphs 1-47 above as if fully set forth herein.

49. As described above, through its membership in the Bluetooth SIG and participation in standards setting by the Bluetooth SIG, Bandspeed promised, both explicitly and by its representations and/or conduct, to provide a royalty-free license to claims in its issued patents that are necessarily infringed by implementing portions of an adopted Bluetooth Specification.

50. Bandspeed knew and understood that it had agreed to the terms of the License Agreement as a condition of membership.

51. Bandspeed participated in the development of the Bluetooth 1.2 specification standard and advocated adoption of the AFH technology implementation contained therein.

52. As a member of the Bluetooth SIG, Bandspeed participated in the standards setting process for Bluetooth standards.

53. A named inventor, Hongbing Gan, is listed on the face of the Asserted Patents and is named as a primary contributor to Bluetooth Specification version 1.2, which was adopted on November 5, 2003.

54. By submitting contributions to the Bluetooth Specification version 1.2 in view of the License Agreement and as a member of the Bluetooth SIG, Bandspeed promised explicitly and/or implicitly to license any patents, including patent applications, “necessary” to practice such contributions, on a royalty free basis to the Bluetooth SIG and its members, including Broadcom and/or its suppliers and customers. By making that promise, Bandspeed knew or reasonably should have known that such a promise would be relied upon.

55. The Bluetooth SIG and its members, including Broadcom and/or its suppliers and customers, reasonably relied on the foregoing promise in adopting the Bluetooth Specification version 1.2 and later standards and in investing substantial resources developing, manufacturing, and marketing products accused of alleged infringement in this action for complying with those standards. Broadcom’s and/or its suppliers’ and customers’ reliance was reasonably foreseeable.

56. Broadcom has been damaged as a result of its reasonable reliance on Bandspeed’s explicit and/or implicit promises made during standards-setting activities. Broadcom’s reliance on a royalty free license as part of implementing the standard in its products has resulted in developing, manufacturing and marketing products that have been accused by Bandspeed of alleged infringement for complying with the Bluetooth Specification version 1.2 and later versions. Injustice can be avoided only by enforcement of Bandspeed’s promises.

COUNT III – BREACH OF CONTRACT (IEEE)

57. Broadcom repeats, re-alleges and incorporates by reference Paragraphs 1-56 above as if fully set forth herein.

58. For consideration, including Bandspeed’s IEEE membership and its participation in standards setting of the 802.15 standards, Bandspeed entered into an express and/or implied contract with the IEEE’s members (or alternatively, with the IEEE to which IEEE members and

others are third-party beneficiaries) in which Bandspeed agreed, *inter alia*, to abide by the IEEE's rules and policies, including without limitation the IEEE's patent policy.

59. The IEEE's rules and policies, whether formal or informal, including all Bylaws, stipulations, requirements and representations in any form, constitute a contract between Bandspeed and the IEEE's members (or alternatively between Bandspeed and the IEEE, to which IEEE members and others are third-party beneficiaries).

60. Furthermore, Bandspeed's representations and other conduct created express and/or implied contracts with the IEEE and its members (or alternatively between Bandspeed and the IEEE, to which IEEE members and others are third-party beneficiaries).

61. Bandspeed's conduct within the IEEE working groups resulted in the alleged inclusion of Bandspeed's suggested implementation of AFH technology in the IEEE standards.

62. Bandspeed did not disclose to the IEEE or its members that it had pending patent applications it believed would cover aspects of the AFH technology implementation it was advocating within IEEE working groups.

63. Bandspeed breached its contractual obligations relating to the IEEE, including through misrepresentations and/or omissions, by failing to disclose to the IEEE or its members of its pending patent applications and the resulting Asserted Patents.

64. The inclusion of AFH technology in the 802.15 standard happened without non-Bandspeed IEEE members' knowledge that certain aspects would allegedly be covered by pending and/or issued Bandspeed patents, including the Asserted Patents.

65. By agreeing to the terms of the IEEE bylaws, Bandspeed agreed to grant all other IEEE members a license without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination for any adopted IEEE standards allegedly using technology covered by Bandspeed's patents.

66. Bandspeed breached its contractual obligations relating to the IEEE and its members, by bringing the present lawsuit against Broadcom. By the express terms of the IEEE patent policy, Bandspeed is required to license IEEE members under reasonable terms and

conditions for the purpose of implementing the standard. Broadcom has been damaged in being forced to expend resources and pay legal expenses to respond to this improper lawsuit.

67. Broadcom has incurred damages, and will be further damaged in the future due to Bandspeed's breach of its contractual obligations relating to the IEEE.

COUNT IV – PROMISSORY ESTOPPEL (IEEE)

68. Broadcom repeats, re-alleges and incorporates by reference Paragraphs 1-67 above as if fully set forth herein.

69. As a result of its membership in the IEEE and its participation in the standards setting process related thereto, Bandspeed agreed, both explicitly and implicitly, that it would abide by the rules and policies of the IEEE, including the bylaws and the patent policy.

70. Bandspeed knew and understood that it had agreed to the terms of the IEEE bylaws as a condition of membership.

71. As described above, through its membership in the IEEE and participation in standards setting by the IEEE, Bandspeed promised, by its representations and/or conduct, to disclose its patents, including patent applications, under the IEEE patent policy. By making that promise, Bandspeed knew or reasonably should have known that such promise would be relied upon when the IEEE and its members were evaluating its options in adopting the 802.15 standards.

72. The IEEE and its members, including Broadcom and/or its suppliers and customers, reasonably relied on the foregoing promise in adopting the 802.15 standards and investing substantial resources developing, manufacturing, and marketing products accused of alleged infringement in this action for complying with those standards. Broadcom's and/or its suppliers' and customers' reliance was reasonably foreseeable.

73. Without offering Broadcom a license on reasonable terms per the IEEE patent policy, Bandspeed now alleges that compliance with IEEE standards, including the 802.15 standards, constitutes infringement of the Asserted Patents.

74. Broadcom has been damaged as a result of its reasonable reliance on Bandspeed's explicit and/or implicit promises made during standards-setting activities in developing, manufacturing and marketing products that have been accused by Bandspeed of alleged infringement for complying with the IEEE 802.15 standards. Broadcom has also been damaged in being forced to expend resources and pay legal expenses to respond to this improper lawsuit. Injustice can be avoided only by enforcement of Bandspeed's promises.

COUNT V - DECLARATION OF NON-INFRINGEMENT OF THE '418 PATENT

75. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-74.

76. Broadcom has not infringed and is not infringing, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '418 patent either directly, contributorily, by inducement, or otherwise.

77. By reason of the foregoing, Broadcom is entitled to a declaratory judgment of non-infringement of the '418 patent.

COUNT VI - DECLARATION OF NON-INFRINGEMENT OF THE '614 PATENT

78. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-77.

79. Broadcom has not infringed and is not infringing, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '614 patent either directly, contributorily, by inducement, or otherwise.

80. By reason of the foregoing, Broadcom is entitled to a declaratory judgment of non-infringement of the '614 patent.

COUNT VII - DECLARATION OF NON-INFRINGEMENT OF THE '624 PATENT

81. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-80.

82. Broadcom has not infringed and is not infringing, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '624 patent either directly, contributorily, by inducement, or otherwise.

83. By reason of the foregoing, Broadcom is entitled to a declaratory judgment of non-infringement of the '624 patent.

COUNT VIII - DECLARATION OF NON-INFRINGEMENT OF THE '608 PATENT

84. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-83.

85. Broadcom has not infringed and is not infringing, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '608 patent either directly, contributorily, by inducement, or otherwise.

86. By reason of the foregoing, Broadcom is entitled to a declaratory judgment of non-infringement of the '608 patent.

COUNT IX - DECLARATION OF NON-INFRINGEMENT OF THE '643 PATENT

87. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-86.

88. Broadcom has not infringed and is not infringing, either literally or under the doctrine of equivalents, any valid and enforceable claim of the '643 patent either directly, contributorily, by inducement, or otherwise.

89. By reason of the foregoing, Broadcom is entitled to a declaratory judgment of non-infringement of the '643 patent.

COUNT X – DECLARATION OF INVALIDITY OF THE '418 PATENT

90. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-89.

91. The '418 patent is invalid because it is unpatentable as anticipated under 35 U.S.C. § 102, unpatentable as obvious under 35 U.S.C. § 103, fails to meet one or more

requirements of 35 U.S.C. § 112, and/or does not otherwise meet one of more requirements of Title 35 of the United States Code.

92. By reason of the foregoing, Broadcom is entitled to a declaratory judgment that the '418 patent is invalid.

COUNT XI – DECLARATION OF INVALIDITY OF THE '614 PATENT

93. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-92.

94. The '614 patent is invalid because it is unpatentable as anticipated under 35 U.S.C. § 102, unpatentable as obvious under 35 U.S.C. § 103, fails to meet one or more requirements of 35 U.S.C. § 112, and/or does not otherwise meet one of more requirements of Title 35 of the United States Code.

95. By reason of the foregoing, Broadcom is entitled to a declaratory judgment that the '614 patent is invalid.

COUNT XII – DECLARATION OF INVALIDITY OF THE '624 PATENT

96. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-95.

97. The '624 patent is invalid because it is unpatentable as anticipated under 35 U.S.C. § 102, unpatentable as obvious under 35 U.S.C. § 103, fails to meet one or more requirements of 35 U.S.C. § 112, and/or does not otherwise meet one of more requirements of Title 35 of the United States Code.

98. By reason of the foregoing, Broadcom is entitled to a declaratory judgment that the '624 patent is invalid.

COUNT XIII – DECLARATION OF INVALIDITY OF THE '608 PATENT

99. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-98.

100. The '608 patent is invalid because it is unpatentable as anticipated under 35 U.S.C. § 102, unpatentable as obvious under 35 U.S.C. § 103, fails to meet one or more

requirements of 35 U.S.C. § 112, and/or does not otherwise meet one of more requirements of Title 35 of the United States Code.

101. By reason of the foregoing, Broadcom is entitled to a declaratory judgment that the '608 patent is invalid.

COUNT XIV – DECLARATION OF INVALIDITY OF THE '643 PATENT

102. Broadcom incorporates by reference as if set forth fully herein the allegations in Counterclaim Paragraphs 1-101.

103. The '643 patent is invalid because it is unpatentable as anticipated under 35 U.S.C. § 102, unpatentable as obvious under 35 U.S.C. § 103, fails to meet one or more requirements of 35 U.S.C. § 112, and/or does not otherwise meet one of more requirements of Title 35 of the United States Code.

104. By reason of the foregoing, Broadcom is entitled to a declaratory judgment that the '643 patent is invalid.

DEMAND FOR JURY TRIAL

Defendant Broadcom Corporation respectfully demands a jury trial of issues triable to a jury.

PRAYER

WHEREFORE, Broadcom prays:

A. For a judgment that Bandspeed has breached its contractual duties related to the Bluetooth SIG rendering the claims of the Asserted Patents be declared unenforceable;

B. For a judgment that promissory estoppel related to the Bluetooth SIG results in a royalty-free license rendering the claims of the Asserted Patents be declared unenforceable;

C. For a judgment that Bandspeed has breached its contractual duties related to the IEEE rendering the claims of the Asserted Patents unenforceable;

D. For a judgment that promissory estoppel related to Bandspeed's IEEE membership activities renders the claims of the Asserted Patents unenforceable;

E. For a declaratory judgment that the Asserted Patents, and each and every asserted claim thereof, be declared not infringed;

F. For a declaratory judgment that the claims of the Asserted Patents be declared invalid;

G. For a determination that this is an exceptional case pursuant to 35 U.S.C. § 285 in Broadcom's favor and an award to Broadcom of all attorneys fees and expenses incurred in defending Plaintiff's claims and/or prosecuting Broadcom's counterclaims;

H. For a judgment in favor of Broadcom on all of its Counterclaims; and

I. That Broadcom be awarded such other and further relief as the Court shall deem just and reasonable.

Dated: July 9, 2014

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